No. 9700352

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Pioneer Hi-Bred International, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

*WHEAT*

*'25R57'*

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this thirtieth day of September in the year of our Lord one thousand nine hundred and ninety-seven.*

Attest:

*Commissioner*
*Plant Variety Protection Office*
*Agricultural Marketing Service*

*Secretary of Agriculture*

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

*(Instructions and information collection burden statement on reverse)*

*The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).*

*Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).*

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Pioneer Hi-Bred International, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

3. VARIETY NAME
25R57

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

5. TELEPHONE *(include area code)*
(765) 945-7906

6. FAX *(include area code)*
(765) 945-8313

**FOR OFFICIAL USE ONLY**

PVPO NUMBER 9700352

FILING DATE 06/25/1997

FEES RECEIVED
FILING AND EXAMINATION FEE $ 2450.00
DATE 06/25/97
CERTIFICATION FEE $ 300.00
DATE 08/20/97

7. GENUS AND SPECIES NAME
Triticum aestivum

8. FAMILY NAME *(Botanical)*
gramineae

9. CROP KIND NAME *(Common name)*
Wheat

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)* *(Common name)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Iowa

12. DATE OF INCORPORATION
May 1926

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Dr. Gregory C. Marshall
Pioneer Hi-Bred International, Inc.
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

14. TELEPHONE *(include area code)*
(765) 945-7906

15. FAX *(include area code)*
(765) 945-8313

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☑ Exhibit A. Origin and Breeding History of the Variety
b. ☑ Exhibit B. Statement of Distinctness
c. ☑ Exhibit C. Objective Description of the Variety
d. ☑ Exhibit D. Additional Description of the Variety
e. ☑ Exhibit E. Statement of the Basis of the Applicant's Ownership
f. ☑ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)*
g. ☑ Filing and Examination Fee ($2,460), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
☐ YES *(If "yes," answer items 18 and 19 below)* ☑ NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES *(If "yes," give names of countries and dates)* ☑ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

| SIGNATURE OF APPLICANT *(Owner(s))* | | SIGNATURE OF APPLICANT *(Owner(s))* | |
|---|---|---|---|
| Gregory C. Marshall | | | |
| NAME *(Please print or type)* Gregory C. Marshall | | NAME *(Please print or type)* | |
| CAPACITY OR TITLE Coordinator, North American Wheat Research | DATE 6/20/97 | CAPACITY OR TITLE | DATE |

SD-470 (04-95) *(Previous editions are to be destroyed)*

*(See reverse for instructions and information collection burden statement)*

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**16A. Exhibit A. Origin and Breeding History of Pioneer Wheat Cultivar 25R57**

Pioneer ® cultivar '25R57', a soft red winter wheat (*Triticum aestivum* L., em Thell.), was developed by Pioneer Hi-Bred International, Inc.. Using a pedigree selection breeding method, 25R57 was derived from the three parent cross:

Augusta/2555 sib.//2548

The single cross, Augusta/2555 sib., was made in the 1985 spring greenhouse cycle and designated WBF1615. During the 1985 fall greenhouse cycle the F1, WBF1615, was crossed with 2548 and the final cross designated WBG0621. The subsequent breeding history of 25R57 is described below.

| Year | Generation | |
|---|---|---|
| 1985 | Final cross | |
| 1986 | F1 | Grown in spring transplant nursery at Windfall, IN. |
| 1986-87 | F2 | Bulk populations grown at Windfall and Ft. Branch, IN. Individual head selections made. |
| 1987-88 | F3 | Headrows from F2 selections grown at Windfall and Ft. Branch, IN. Heads harvested from selected rows, this selection from Windfall. |
| 1988-89 | F4 | Headrows of F3 selections grown at Windfall and Ft. Branch, IN. Heads harvested from selected rows, this selection from Windfall. |
| 1989-90 | F5 | Seed from 8 heads from each selected F4 headrow planted in the greenhouse at Hutchinson, KS. Two heads tracing to each of the 8 F4 heads per selected row were harvested. |
| 1990 | F6 | From each F5 head, 4 F6 hill-plots were grown in the spring transplant nursery at Windfall. The hill plots from each F5 head were harvested in bulk. |
| 1990-91 | F7 | Preliminary yield testing of F5 selection from F6 hill-plots. Selection designated WBG0621C1. |
| 1991-92 | F8 | Advanced yield testing of WBG0621C1. Harvested 200 heads from small bulk increase. |
| 1992-93 | F9 | Elite yield testing of WBG0621C1. 100 purification headrows grown. Offtype rows destroyed, remainder harvested and threshed individually. 200 heads harvested from remaining headrows prior to harvest. |
| 1993-94 | F10 | Elite yield testing of WBG0621C1 continues. Seed from purification headrows planted in individual progeny plots which surround 200 headrows. Offtype progeny plots and headrows destroyed prior to harvest. 100 headrows |

| | | |
|---|---|---|
| | | harvested and threshed individually. About 1000 heads (total) harvested from remaining progeny plots. Progeny plots harvested in bulk which constitutes Breeder Seed. Bulk seed and heads turned over to Pioneer's Parent Wheat Seed Production Dept.. |
| 1994-95 | F11 | Elite yield testing continues, designated 'YW548'. Pioneer Parent Wheat Seed Dept. continues increase. |
| 1995-96 | F12 | Elite yield testing continues, designated 'XW548'. Pioneer Parent Wheat Seed Dept. continues increase. |

Decision to release WBG0621C1 was made in August, 1996, at which time it was given the commercial code, 25R57.

The cultivar 25R57 was bred and selected at each generation for any or all of the following characteristics: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking qualities.

25R57 has been observed to be uniform and stable since the 7$^{th}$ generation, or the last 6 generations. Variants are limited to slightly taller plants or awned plants, neither at a frequency greater than 1/45,000 plants.

**16B. Exhibit B. Statement of Distinctness**

Pioneer cultivar 25R57 is most similar to Pioneer cultivar 2510, but with the following distinguishing characteristics:

1) The juvenile plant growth of 25R57 is semi-erect, while that of 2510 is erect.
2) The heads of 25R57 are mid-dense, while the heads of 2510 are dense.
3) The heads of 25R57 are awnletted, while the heads of 2510 are apically awnletted.
4) The phenol reaction of 25R57 is light brown, while that of 2510 is dark brown.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT
(Wheat)

# OBJECTIVE DESCRIPTION OF VARIETY
## WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)
Pioneer Hi-Bred International, Inc.

ADDRESS (*Street and No. or R.F.D. No., City, State, and Zip Code*)
Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

FOR OFFICIAL USE ONLY
PVPO NUMBER 9700352

VARIETY NAME
25R57

TEMPORARY OR EXPERIMENTAL DESIGNATION

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [ ][ ][ ] or [ ][ ]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Munsell Color Charts for Plant Tissues

**Please answer all questions for your variety; lack of response may delay progress of your application.**

1. KIND:

[1] 1=Common 2=Durum 3=Club 4=Other (SPECIFY) _____

2. VERNALIZATION:

[2] 1=Spring 2=Winter 3=Other (SPECIFY) _____

3. COLEOPTILE ANTHOCYANIN:

[1] 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

[2] 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

[1] 1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

[1] 1 = Erect 2 = Recurved [2] 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

[0][4] Number of Days Earlier Than 2510 *

[ ][ ] Number of Days Later Than _____ *

8. ANTHER COLOR:

[1] 1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

[0][7] cm Taller Than 2510 *

[ ][ ] cm Shorter Than _____ *

10. STEM:

A. ANTHOCYANIN

[1] 1=Absent 2=Present

B. WAXY BLOOM

[2] 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)

[2] 1=Absent 2=Present

D. INTERNODE (SPECIFY NUMBER) 4

[1] 1=Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE

[2] 1=Absent 2=Present

[37] cm Length

11. HEAD (at Maturity):

A. DENSITY

[2] 1=Lax 2=Middense 3= Dense

B. SHAPE

[4] 1 = Tapering 2= Strap 3 = Clavate 4 = Other (SPECIFY) Oblong

C. CURVATURE

[2] 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

[3] 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

[1] 1 = White 2 = Tan 3 = Other (SPECIFY) _____

B. SHOULDER

[3] 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

[1] 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH

[1] 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

[3] 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

[1] 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

[1] 1=Rounded 2=Angular

C. BRUSH

[1] 1=Short 2=Medium 3=Long

[1] 1 = Not Collared 2 = Collared

D. CREASE

[1] 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[1] 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

13. SEED: (continued)

E. COLOR

[3] 1 = White 2 = Amber 3 = Red 4 = Other (SPECIFY) _____

F. TEXTURE

[2] 1=Hard 2=Soft

G. PHENOL REACTION *(see instructions)*:

[3] 1 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

Stem Rust *(Puccinia graminis* f. sp. *tritici)*
[2] General

Stripe Rust *(Puccinia striiformis)*
[ ]

Tan Spot *(Pyrenophora tritici-repentis)*
[3] General

Halo Spot *(Selenophoma donacis)*
[ ]

*Septoria nodorum* (Glume Blotch)
[3] General

*Septoria avenae* (Speckled Leaf Disease)
[ ]

*Septoria tritici* (Speckled Leaf Blotch)
[3] General

Scab (*Fusarium* spp.)
[3] General

"Black Point" (Kernel Smudge)
[ ]

Barley Yellow Dwarf Virus (BYDV)
[ ]

Soilborne Mosaic Virus (SBMV)
[1] General

Wheat Yellow (Spindle Streak) Mosaic Virus
[3] General

Wheat Streak Mosaic Virus (WSMV)
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Leaf Rust *(Puccinia recondita* f. sp. *tritici)*
[3] General

Loose Smut *(Ustilago tritici)*
[ ]

Flag Smut *(Urocystis agropyri)*
[ ]

Common Bunt *(Tilletia tritici* or *T. laevis)*
[ ]

Dwarf Bunt *(Tilletia controversa)*
[ ]

Karnal Bunt *(Tilletia indica)*
[ ]

Powdery Mildew *(Erysiphe graminis* f. sp. *tritici)*
[2] General

"Snow Molds"
[ ]

Common Root Rot *(Fusarium, Cochliobolus* and *Bipolaris* spp.)
[ ]

Rhizoctonia Root Rot *(Rhizoctonia solani)*
[ ]

Black Chaff *(Xanthomonas campestris* pv. *translucens)*
[ ]

Bacterial Leaf Blight *(Pseudomonas syringae* pv. *syringae)*
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

Other (SPECIFY) _____
[ ]

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

Hessian Fly *(Mayetiola destructor)* [1] Biotypes B,C,E, and L

Stem Sawfly *(Cephus spp.)* [ ]

Cereal Leaf Beetle *(Oulema melanopa)* [ ]

Russian Aphid *(Diuraphis noxia)* [ ]

Greenbug *(Schizaphis graminum)* [ ]

Aphids [ ]

Other (SPECIFY) [ ]

Other (SPECIFY) [ ]

Other (SPECIFY) [ ]

Other (SPECIFY) [ ]

Other (SPECIFY) [ ]

Other (SPECIFY) [ ]

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

**16D. Exhibit D. Additional Description of the Variety**

1) Yield and agronomic information.

Preliminary yield testing of 25R57 began in the 1990-91 growing season and wide scale testing has been conducted from the 1991-92 growing season to the present. It has shown adaptation to the northern soft red winter wheat regions based on tests conducted in Michigan, Ohio, Indiana, Illinois, and Missouri (Table 1).

2) Information on reaction to major diseases.

Leaf rust - Good resistance to prevalent races in the northern soft wheat region.

Powdery mildew - Very good resistance to prevalent races of powdery mildew in the soft wheat region.

Soil borne mosaic and Wheat spindle streak mosaic viruses - Adequate resistance to Wheat Spindle Streak Mosaic but susceptible to Wheat Soilborne Mosaic virus.

Fungal leaf blights - Moderate tolerance to the complex of most common organisms which cause fungal leaf blights, including: *Septoria tritici* leaf blotch, *Stagonospora nodorum* glume blotch, and Tan spot.

3) Information on reaction to major insects.

Hessian fly - Susceptible to the predominant biotypes of Hessian fly in the northern soft wheat region. Has screened susceptible to biotypes B, C, E, and L in tests conducted by the Dept. Of Entomology, Purdue University, in conjunction with the USDA-ARS Insect and Weed Control unit.

4) Information on milling and baking qualities.

25R57 has demonstrated very good milling and baking qualities (Table 2).

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**Table 1.** Varietal yield performance and agronomic characteristics recorded in Pioneer Elite yield tests during the period 1993-96.

| Variety | Grain yield | Test weight | Plant height | Heading date | Leaf rust | Powdery mildew | Leaf blight | SSMV | SBMV+ | Scab | Stem rust |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | bu/ac | lb/bu | cm | Jan 1. | 1-9@ | 1-9@ | 1-9@ | 1-9@ | 1-9@ | 1-9@ | 1-9@ |
| **25R57** | **83.3** | **56.6** | **99.8** | **136.0** | **6.4** | **7.3** | **5.0** | **4.5** | **3.3** | **4.7** | **8.3** |
| 2510 | 76.4 | 55.6 | 92.7 | 140.0 | 5.8 | 5.3 | 6.4 | 8.5 | 7.8 | 5.6 | 8.7 |
| 2548 | 77.2 | 56.7 | 93.7 | 136.9 | 6.4 | 7.1 | 4.7 | 3.8 | 2.4 | 6.1 | 7.7 |
| 2555 | 75.7 | 55.1 | 100.3 | 136.4 | 5.8 | 5.8 | 5.2 | 7.5 | 7.5 | 3.0 | 6.3 |
| Cardinal | 75.4 | 56.5 | 109.5 | 138.8 | 6.5 | 4.2 | 5.5 | 6.8 | 3.6 | 6.5 | 6.7 |
| Clark | 70.6 | 56.4 | 98.8 | 133.1 | 3.8 | 5.3 | 5.1 | 7.6 | 6.8 | 4.5 | 5.7 |
| lsd(0.05) | 2.5 | 0.6 | 2.3 | 0.8 | 1.0 | 0.8 | 1.0 | 1.0 | 1.0 | 0.6 | 1.2 |
| # envs. | 43 | 30 | 9 | 8 | 4 | 7 | 5 | 5 | 4 | 14 | 2 |

'@' Scale of 1 to 9, where 9 = excellent or resistant: 1 = poor or susceptible.

'+' Data collected at the University of Illinois SBMV nursery.

Data in the above table gathered at: Truxton, MO; Altamont, IL; Mascoutah, IL; Carlisle, IN; Westport, IN; Ft. Branch, IN; Windfall, IN; Napoleon, OH; Pitsburg, OH; Bucyrus, OH; Blissfield, MI.

**Table 2.** Soft wheat quality data from the Pioneer Quality Lab, Johnston, IA 1992-96.

| Variety | Flour yield | Break flr yld | Grain protein | AWRC | Cookie | Top grain | Top grain ab. | # Obs. |
|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | cm | 1-9@ | 1-9@ | |
| **25R57** | **71.1** | **37.4** | **8.4** | **53.8** | **19.3** | **5.2** | **6.3** | **20** |
| 2510 | 72.8 | 37.3 | 8.0 | 57.5 | 19.2 | 4.8 | 6.4 | 28 |
| 2548 | 70.2 | 35.5 | 8.3 | 58.0 | 18.6 | 4.1 | 5.4 | 34 |
| 2555 | 72.5 | 40.0 | 8.3 | 56.1 | 19.7 | 5.1 | 6.7 | 34 |
| Cardinal | 72.0 | 35.4 | 8.6 | 55.2 | 19.3 | 5.3 | 6.0 | 12 |
| Clark | 69.0 | 34.4 | 8.7 | 56.3 | 19.1 | 4.8 | 5.6 | 10 |

Trait abbreviations used in the above table:

AWRC = Flour Alkaline Water Retention Capacity (%)

Cookie = Cookie diameter in cm.

Top grain = Top grain rating of cookie, 1-9 scale (1=poor, 9=excellent)

Top grain abnorm. = Top grain abnormalities of cookie, 1-9 scale (1=narrow valleys, 9=wide valleys)

**16E. Exhibit E. Statement of the Basis of Applicant's Ownership**

The variety, '25R57', for which plant variety protection is sought, was developed by employees of Pioneer Hi-Bred International, Inc., Research and Product Development. By agreement between employees and Pioneer Hi-Bred International, Inc., all rights to any invention, discovery, or development, while an employee, are assigned to Pioneer Hi-Bred International, Inc., with no rights retained by the employee.

Pioneer Hi-Bred International, Inc., Research and Product Development, believes it is the sole, original, and first breeder of 25R57 variety of soft red winter wheat for which it solicits a certification of protection.